UNIVERSITY of TORONTO SCARBOROUGH

Memory and Cognition (PSYB57 W)

Department of Psychology, U.T.S.C.

Winter 2011

01 COURSE DESCRIPTION

This course is designed to introduce you to the field of cognitive psychology – the study of mental representations and processes involved in the acquisition, storage, retrieval, and use of knowledge. We will review several of those representations and processes—including attention, memory, concept formation, and language.

Prerequisites: PSY A01 and PSY A02. *Recommended: PSY B07 or STAV B22 or their equivalent.*

OBJECTIVES

This course will expose you to a broad range of methods and approaches within cognitive psychology and more importantly will teach you how cognitive experimental psychologists explore the mental realm. Cognitive psychologists seek to understand the mind and processes that cannot always be directly observed. To do this we ought to consider carefully the methodologies we employ. In this course you will have an opportunity to develop an appreciation and insight into the interplay between phenomenon and theory. Most of the seminar lectures will begin with consideration of a real-world phenomenon that has inspired cognitive psychologists to question its underlying mechanisms. Rather than merely passively having to listen to descriptions of research findings, you will be asked to make discoveries for yourselves by participating in on-line demonstrations of classic experiments.

The goal of the course is to:

1. Help you gain knowledge and a deeper understanding of the main issues and controversies in cognitive psychology
2. Help you learn about the scientific methods employed in cognitive research and develop critical thinking skills for evaluating research findings
3. Help you develop the skill to make connections between real world situations and research findings, in order to develop an appreciation for the applicability of findings in cognitive psychology and their real world application.

4. Give you a first hand experience of what cognitive experiments are like, how individual and group data looks like, their design and methodology.

To pass this course, you need to:

1. Differentiate psychological facts from myths
2. Match definitions and explanations of psychological concepts with their appropriate terms and labels
3. Match prominent psychologists with their theories, principles, or concepts
4. Identify which psychological concepts are being used in particular examples
5. Remember the methodological design and findings of key psychological studies
6. Determine the implications of psychological findings for human behaviour
7. Use the psychological concepts from this course to explain human behaviour

02 COURSE INFORMATION

Professor: **Dr. Gabriela Ilie, *Ph.D.***
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If you have something personal you need to talk to me about, do NOT communicate electronically; **come talk to me in person to discuss it**. **Drop in during my office hours or talk to me after class**. *In the event you cannot do either*, only then you can email me at gilie@utsc.utoronto.ca. For security purposes, and time considerations, student emails will be answered if and only if the subject line contains your name, student number, and course number. Please be advised that email attachments from students will not be opened for security reasons.

Lecture Time: Mon 12:00 pm – 15:00 pm
Lecture and Labs Location: AA112
Course Website: **Use Blackboard to access course information, lecture slides, and course announcements.**

The Blackboard contains this course outline, the Microsoft Power Point slides you will see each week in class, iPad, iPod, iPhone Key note slides (for MAC users), your lab

assignments, CogLab 2.0 access information, your marks, discussion board, and any special notices and weekly announcements.

The slides available on this website are NOT an adequate substitute for attending class. The material discussed in lectures goes BEYOND the information available in the textbook and lecture slides. It is therefore important that you attend all lectures and laboratories and do not miss on this important information.

Attendance and Participation:

Because the lectures will cover material that is not contained in the readings, class attendance is essential. Repeated late arrivals to class, or talking while the instructor or other students are speaking, are disrespectful to the instructor and other class members. Please be punctual and do not talk in class while the professor is speaking.

Cell Phones:

Please respect others in the class by turning off all cell phones and pagers before entering the auditorium.

Special Needs:

If you have a disability or other special needs, please notify the Accessibility Services during the first week of the semester, and we will do our best to accommodate them. Forms from Accessibility must be submitted to me within the first week of classes.

03 REQUIRED TEXTBOOK

Galotti, K.M., Fernandes, M.A., Fugelsang, J., & Stolz, J.A. (2010). Cognitive Psychology: In and Out of the Laboratory, 1st Canadian Edition, Nelson Publishers.
Packaged with ***CogLab Online Access Code Version 2.0***. and **CogLab Reader**
Please note the UTSC Bookstore has these resources packaged at a cheaper cost (around $170) than if you were to buy them individually (around $270).

04 EVALUATION

Exams (90%)**;** Lab demonstrations: (10%)

EXAMS

The first Term Test is scheduled on February 7th from 12:00-13:00 pm (see Lecture Schedule). This Term exam will be worth 15% of your final grade. This exam will consist of

30 MC questions text and lecture based. The midterm exam is scheduled on February 28th from 12 pm to 13:00 pm (see lecture Schedule). The Mid-Term exam will be worth 30% of your final grade. This exam will consist of 50 MC questions, 1 short answer question. The mid-term exam is based on the text, lectures, and the CogLab readings that correspond to the chapters tested. The second term exam is scheduled on March 21st from 12:00 pm to 13:00 pm (see lecture Schedule). This Term exam will be worth 15% of your final grade. This exam will consist of 30 MC questions. There is also a final exam worth 30% (i.e., only information presented after the mid-term exam) that will be scheduled by the Registrar during the final exam period (April 12 to May 1st 2011). The final exam will consist of 100 MC questions, and 1 short answer question. The final exam is based on the text, lectures, and the CogLab readings that correspond to the chapters tested. The date, time, and room for the final exam will be chosen by the Registrar and will be posted on the campus' website under "exam schedule". The purpose of exams is to determine each student's current level of course knowledge. The exams cover as representatively as possible the contents of lectures, lecture materials (e.g. video material, guest speakers, etc.), and lab materials and exercises knowledge. You should not assume that the material covered in lectures is more important than that covered in the textbook -- the textbook actually contains more information than lectures, a fact that will be reflected in exams. The names of the specific researchers are not of critical importance since questions will provide sufficient information for the identification of research. You must, however, familiarize yourself with the names of important theorists.

LAB DEMONSTRATIONS, COGLAB and Discussion Forum

You will be required to read 11 selective research articles from CogLab Reader. These readings accompany the CogLab experiment demonstrations that you will be required to do for a total of 10% of your course grade. Your knowledge of these selective readings will be assessed during the Mid-term and Final examination, only. To clarify, they will *not* be assessed during the two term tests but only the Mid-term and Final examinations.

The purpose of the CogLab readings and demonstrations is to offer you a first hand experience of what some of the concepts and theories discussed in lectures and text are all about. They give you a tangible experience of how experiments are conducted in cognitive psychology and how individual and group data really look like. They also help you gain perspective with respect to the historical and theoretical developments of each area of research, something that otherwise will be difficult if not impossible to accomplish in a course with such large attendance as this.

Do not be afraid of the readings because of their academic jargon. The CogLab reader provides you with an introduction for each article that clarifies any of its obscure segments and give you a clear sense of the study is about, important aspects of the methodology and design, etc.. You are encouraged to use the Blackboard discussion section to talk about these articles among yourselves and the TAs.

Each Lab is worth 0.91% and must be completed by the deadlines listed below. If you miss the deadline, you will be assigned a 0% for that particular LAB. No exceptions will be made. Make sure you do these LAB (which take about 5-10 minutes) way before the deadline to avoid this potential disappointment. Please do not come and see me to plea for an extension or ask for an exception to this rule. This rule stands as it is for everyone in the class no matter the circumstances. If you miss the LAB's deadline, however, you will be alloMon to proceed with the experiment demonstration in order to gain the experience. Your assigned mark for the LAB in this case will be 0% but you will at least gain the first hand experimental experience.

Information on how to set up your account (your user ID and password) has been posted on Blackboard. Have fun with the experiments! One added value to these experiments is that they all illustrate ONE experiment discuss in the text book. You will be relieved to actually have a chance to see yourself what they were all about rather than just reading their description. I anticipate this first hand experience will also help you perform better on your exams than if you didn't have this first hand experience. So make the best out of it!

LAB SCHEDULE AND DUE DATES

WEEK/ LECTURE	**TOPIC**	**COGLAB READER CHAPTER**	**COGLAB 2.0 EXPERIMENT (TEXT REFERENCE)**
Mon Jan 10/ NO LAB			
Mon Jan 17/ LAB 1	Brain asymmetry	3 (9)	Brain asymmetry) DUE January 16 at 10 pm
Mon Jan 24/ LAB 2	Word superiority effect	10 (27)	Word superiority effect DUE January 23 at 10 pm
Mon Jan 31/ LAB 3	The stroop effect	1 (4)	Stroop effect DUE January 30 at 10 pm
Mon Feb 7/ LAB 4	The Sternberg Search	5 (15)	Sternberg search DUE February 6 at 10 pm
Mon Feb 14/ LAB 5	Serial Position	7 (19)	Serial position effect DUE February 13 at 10 pm
Mon Feb 21/ READING WEEK NO LAB			
Mon Feb 28/ LAB 6	Implicit learning	11 (29)	Implicit learning DUE Feb 27 at 10 pm
WEEK/ LECTURE	**TOPIC**	**COGLAB READER CHAPTER**	**COGLAB 2.0 EXPERIMENT (TEXT REFERENCE)**
Mon Mar 7/	Mental rotation	9 (24)	Mental rotation

LAB 7			DUE Mar 6 at 10 pm
Mon Mar 14/ LAB 8	Categorical perception	10 (25)	Categorical perception DUE Mar 13 at 10 pm
Mon Mar 21/ LAB 9	Wason Selection Task	12 (32)	Wason selection task DUE Mar 20 at 10 pm
Mon Mar 28/ LAB 10	Risky decisions	12 (31)	Risky decisions DUE Mar 27 at 10 pm
Mon Apr 4/ LAB 11	Remember/ know	8 (23)	Remember/know DUE Apr 3 at 10 pm

ACCEPTABLE DOCUMENTATION FOR MISSING AN EXAM.

Personal Illness: You will need a specific UTSC Medical Note form from the Registrar's office for your doctor to fill out. Notes stating "for medical reasons" or that "Johnny is sick" are not sufficient.

Death of a Loved One: Obtain a copy of the newspaper notice, death certificate, or documentation provided by the funeral director.

Make-up exams will be provided **only** for serious medical or compassionate situations with the appropriate supporting documentation that have been verified by our offices. Contacting me BEFORE the exam lends credibility to your issues.

Make-up exams MAY consist of a combination of essay questions, fill in the black, short-answer and or/ multiple choice questions. Obviously, the exact same exam cannot be given for the make-up as more than 150 students will already have written it. The easiest way to test for similar information without using the exact same questions is to change the format of the exam.

05 LECTURE SCHEDULE

Approximate lecture dates are given so that you can keep up with the readings. Ideally, you should do the required readings before the topic is covered in class. Lectures are intended to highlight certain areas of each topic and to give you additional information to compliment what you have learned from the textbook. You are responsible for **all** the material covered in lectures and the assigned readings. In other words, everything in lecture and the text is important and will be fair game on the exams. Please note that there is a fairly heavy reading load in this course – we cover at least one chapter every week. Thus, it is important for you to keep up with the readings. You are responsible for ALL of the material in the assigned chapter. The lecture slides will occasionally point out specific pages. This is to assist you in studying. You are still responsible for the pages not mentioned in the lectures.

WEEKLY COURSE TOPICS AND ASSIGNED TEXT CHAPTERS

WEEK/ LECTURE	TOPIC	CHAPTER	PURPOSE
Mon Jan 10/ Lecture 1	Introduction Foundations of Cognitive Psychology: History, methods and paradigms.	1	Lectures 1 and 2 will introduce you to cognitive psychology in its historical context as well as outlines basic neuroanatomy and investigative techniques employed in cognitive neuroscience.
Mon Jan 17/ Lecture 2	Foundations of Cognitive Psychology: The Human Brain.	2	
Mon Jan 24/ Lecture 3	The process of learning about the world around us: perceiving objects, recognizing patterns.	3	Lectures 3 and 4 will introduce you to the oftentimes under-appreciated problem of attention, selecting and processing relevant information from the world around us
Mon Jan 31/ Lecture 4	Attention.	4	
Mon Feb 7/ Lecture 5	Remembering: memory structures **FIRST TERM TEST: Chapters: 1, 2, 3, 4**	5	Lectures 5 and 6 will introduce you to an array of aspects about memory. They range from historical and current concepts on memory structures, to debate about what is stored and for how long.
Mon Feb 14/ Lecture 6	Remembering: memory processes	6	

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WEEK/ LECTURE	TOPIC	CHAPTER	PURPOSE
Mon Feb 21	READING WEEK – No classes		
Mon Feb 28/ Lecture 7	Knowing: concepts and categorization **MID TERM EXAM: Chapters: 1, 2, 3, 4, 5, 6 DATE: Will be announced on blackboard at the end of January.**	7	Lectures 7 and 8 will introduce you to the problems of understanding how our vast knowledge is organized. These lectures will explore the question of whether visual knowledge is truly visual and reveals how neuroscience has weighed in on the debate. Lecture 6: Invited Guest Lecturer: Professor Emeritus John Kennedy.
Mon Mar 7/ Lecture 8	Knowing: visual imagery and Spatial Cognition	8	

Mon Mar 14/ Lecture 9	Language	9	Lectures 9, 10 and 11 introduces research about language acquisition and children's preparedness for language, and explores the higher cognitive functions or processes such as problem solving, reasoning, and decision making, and the situations that limit these processes.
Mon Mar 21/ Lecture 10	Thinking and making sense of the world **SECOND TERM TEST: Chapters: 7, 8, 9**	10	
Mon Mar 28/ Lecture 11	Making Decisions	11	

Mon Apr 4/ Lecture 12	Differences in Cognition	12	Lecture 12 will explores individual differences in cognition.

T.B.A.	**FINAL EXAMINATION**	**7, 8, 9, 10, 11, 12**	**Date and Time to be announced on Blackboard and the Office of the Registrar's office**

If you miss a class, it is YOUR responsibility to cover any readings, to borrow notes, and to learn of any in class announcements from a classmate. The instructor will not re-run the lecture during office hour or through email requesting information on missing classes. If you want to know what happened in a lecture, attend the lecture. Movie clips will often be shown during lectures. These movie clips may not be available outside of class time.

06 POLICY ON CHEATING AND ACADEMIC MISCONDUCT

"Academic integrity is essential to the pursuit of learning and scholarship in a university, and to ensuring that a degree from the University of Toronto is a strong signal of each student's individual academic achievement. As a result, the University treats cases of cheating and plagiarism very seriously. The University of Toronto's Code of Behaviour on Academic Matters (http://www.governingcouncil.utoronto.ca/policies/behaveac.htm) outlines the behaviours that constitute academic dishonesty and the processes for addressing academic offences. Potential offences include, but are not limited to:

In papers and assignments:

Using someone else's ideas or words without appropriate acknowledgement.

Submitting your own work in more than one course without the permission of the instructor.

Making up sources or facts.

Obtaining or providing unauthorized assistance on any assignment.

On tests and exams:

Using or possessing unauthorized aids.

Looking at someone else's answers during an exam or test.

Misrepresenting your identity.

In academic work:

Falsifying institutional documents or grades.

Falsifying or altering any documentation required by the University, including (but not limited to) doctor's notes. All suspected cases of academic dishonesty will be investigated following procedures outlined in the Code of Behaviour on Academic Matters.

If you have questions or concerns about what constitutes appropriate academic behaviour or appropriate research and citation methods, you are expected to seek out additional information on academic integrity from your instructor or from other institutional resources (see http://www.utoronto.ca/academicintegrity/)."

With permission from: http://ctl.utsc.utoronto.ca/home/integrity

To avoid being accused of cheating on an exam, I offer the following suggestions:

1. Do not sit near friends.
2. Shield your answer sheet so that others can not see it.
3. Take no notes, books, etc. into an exam except those expressly authorised. If in doubt, ask.

4. Do not gaze around the room when writing an exam.
5. Do not communicate with other students during an exam. Address all questions or comments to a proctor.
6. Arrive on time. Hand in all papers requested.
7. If you hear of anyone acquiring information about an exam in advance, report it to the instructor.
8. If you suspect any suspicious behaviour on behalf of other students, report it to the proctor or instructor.

07 LEARNING INFORMATION EFFICIENTLY

1. You will be expected to know the assigned chapters VERY WELL!
Many of the multiple-choice questions in this course are based on material from the chapters that is not explicitly covered in lecture (and vice versa). To be able to answer these questions correctly you will need to know and understand each of the concepts and processes described in the assigned chapters. This is a major learning task and many students run into difficulties because they do not know how to handle this learning task efficiently.

2. Just reading the assigned chapters is NOT enough!
For most people the process of reading something, or even re-reading it, does not mean that they remember it. This is especially true for "heavy" course content such as that found in the cognitive psychology text. If you wish to learn the material from the text efficiently, you will need to approach it in a different manner.

3. Learn the text chapters using ACTIVE reading/learning strategies.
Strategies recommended for efficient learning of text material can be divided into three types: pre-reading, reading for comprehension, and post-reading.

a. **Pre-reading.** Instead of diving immediately into reading the chapter, spend a few minutes learning the headings and subheadings. The headings and subheadings tell you the important ideas that will be covered in the chapter. Look at these headings and subheadings, think how they have been ordered, try reciting them from memory, and then write them out on a separate sheet of paper.
b. **Reading for comprehension.** Read a few pages and THEN summarize. Don't try to read most of the chapter in one sitting. It is much easier to learn the material in small chunks. Read a few pages carefully and THEN make a summary of the important points. Continue doing this until you have summarized about 10 pages - then take a break. You can summarize by highlighting sparingly AND making marginal notes, or by making separate written notes. Note that much of the information in psychology comes in the form of arguments. Here are some the important kinds of information that are crucial to knowing and understanding an argument: i) definitions of new terms, ii) essential explanations of the specific argument, iii) examples, iv) results of

studies. If you make separate summary notes, try using point form and keywords. This has 2 advantages: the notes are made more quickly and they are easier to read. As you record key terms and definitions ALWAYS relate them to the arguments of which they are a part.

c. **Post-reading.** Test yourself. After actively reading 10 or more pages in the manner described above, try reciting (i.e., recalling from memory) all the important points under each heading and subheading that you have studied. This will reinforce the ideas you know and identify those that you need to review. Doing the study guide questions and relevant old exam questions after you have finished the entire chapter can also be very helpful.

4. **Use the textbook Study Guide.** The Study Guide that comes with your textbook will help you to determine the essential elements of the text, as well as providing you with practice exams to test your knowledge.

DISCLAIMER

The course outline is subject to change. The official outline for this course can be found in the course materials in the first week of class.